Reptiles Across Time

Compare a living alligator with an extinct dinosaur

ZOO.8.7 "Compare and contrast living and extinct reptiles."

NAME _____ DATE _____

1 READ AND MARK

Read it twice

YOUR JOB In the passage, underline two traits alligators and Maiasaura shared, circle one detail about each reptile's diet, and write O beside a behavior scientists can observe in alligators and F beside a behavior inferred from Maiasaura fossils.

A Marsh Hunter and a Land Grazer

1 At dusk in a Florida marsh, an American alligator slides from a muddy bank into shallow water. This living reptile uses its muscular tail to swim and its eyes and nostrils, set high on its head, to watch and breathe while most of its body stays submerged. It hunts fish, turtles, and other animals with powerful jaws. On land, its legs extend to the sides of its body more than a dinosaur's upright legs did, although it can lift its belly and walk. A female builds a nest of plants, guards her eggs, and helps hatchlings reach water.

2 About 76 million years ago, Maiasaura lived in what is now Montana. This extinct duck-billed dinosaur was a reptile, but it was not a giant version of an alligator. Its legs stood beneath its body, supporting travel over land; it could move on two or four legs. A broad beak and rows of grinding teeth helped it eat plants instead of catching animal prey. Fossil nests, eggs, and young found together show that Maiasaura reproduced by laying eggs in land nests. These finds suggest adults may have cared for young, though fossils cannot show every detail of their behavior.

3 Alligators and Maiasaura belonged to the archosaur branch of the reptile family tree. Both laid eggs and had tails and strong jaws, yet those features served different ways of life. The alligator still occupies wet habitats and often swims to hunt; Maiasaura lived on land and ate vegetation. A living alligator can be watched feeding or tending young, but scientists must use bones, teeth, and nests to infer Maiasaura's habits. The comparison also has a limit: Maiasaura is one extinct reptile, not a model for every extinct reptile. Some extinct reptiles, such as mosasaurs, lived in water.

2 ANSWER WITH EVIDENCE

Use the passage

1. How did the two reptiles differ in where and how they moved?

2. What did both reptiles do to reproduce? How does the evidence for care of young differ?

3. Compare their diets, and name a feeding feature described for each reptile.

4. Name one body trait both reptiles had and one difference in their leg positions.

3 YOUR TURN

Your own words

A museum visitor says, “Maiasaura was just an alligator that lived long ago.” Write a four- or five-sentence reply using one similarity, two differences, and a limit on what fossils can tell us.

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PART 1 · READ AND MARK

In the passage, underline two traits alligators and Maiasaura shared, circle one detail about each reptile's diet, and write O beside a behavior scientists can observe in alligators and F beside a behavior inferred from Maiasaura fossils. Accept any marking that follows this job and points at the right text.

PART 2 · ANSWERS

#	QUESTION	ANSWER
1	How did the two reptiles differ in where and how they moved?	**Alligators live in wet habitats and swim with their tails. Maiasaura traveled on land, on two or four legs positioned beneath its body.**
2	What did both reptiles do to reproduce? How does the evidence for care of young differ?	**Both laid eggs. Scientists can observe female alligators guarding eggs and helping hatchlings, while Maiasaura fossils only suggest that adults may have cared for young.**
3	Compare their diets, and name a feeding feature described for each reptile.	**Alligators hunt animals with powerful jaws. Maiasaura ate plants using a broad beak and grinding teeth.**
4	Name one body trait both reptiles had and one difference in their leg positions.	**Both had tails or strong jaws. Maiasaura's legs stood beneath its body; an alligator's legs extend farther to its sides.**

PART 3 · YOUR TURN (SAMPLE ANSWER)

Maiasaura was not simply an ancient alligator, though both reptiles belonged to the archosaur branch and laid eggs. Alligators hunt animals in wet habitats, while Maiasaura ate plants on land. Alligators swim with muscular tails, but Maiasaura traveled over land on legs positioned beneath its body. We can watch alligators care for young, but Maiasaura's nests only suggest adult care. Fossils do not reveal every detail of its behavior.

Accept other passage-supported similarities and differences. Responses should distinguish observed alligator behavior from inferences about Maiasaura rather than treating suggested parental care as certain.